

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-13 are pending in the application, with claims 1 and 13 being the independent claims. Claims 1-13 are sought to be amended. Claims 14-15 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Applicant reserves the right to prosecute similar or broader claims, with respect to the cancelled and amended claims, in the future. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Claim Objection***

Claims 5-15 were objected to under 37 C.F.R. §1.75(c) as allegedly being in improper form because a multiple dependent claim cannot depend on another multiple dependent claim. Applicant respectfully disagrees.

Without acquiescing to the propriety of the objection, Applicant has amended claims 5-13 for other reasons and to expedite prosecution. Applicants respectfully request that the Examiner reconsider and withdraw the objection.

Without acquiescing to the propriety of the objection, Applicant has cancelled claims 14 and 15 without prejudice to or disclaimer of the subject matter therein, rendering the objection moot.

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***Rejection under 35 U.S.C. § 112***

Claims 14 and 15 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully disagrees.

Although Applicant believes claims 14-15 comply with 35 U.S.C. §112, without acquiescing to the Examiner's reasons for rejection, and only to expedite prosecution, claims 14 and 15 have been cancelled without prejudice to or disclaimer of the subject matter therein, rendering the rejection moot.

***Rejection under 35 U.S.C. § 103***

Claims 1-5 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,801,914 to Thrash ("Thrash") in view of U.S. Patent No. 3,360,631 to Hess ("Hess"). Applicant respectfully traverses this rejection.

The Examiner has failed to establish a prima facie case of obviousness because (A) The applied references lack at least "*applying a current along at least one of said conductors of the cable*" and "that allows plastic flow", (B) The Examiner uses Improper Hindsight, and/or (C) The Combination Destroys The Teachings In The Other Reference By Making The System Unsatisfactory For Its Intended Purpose And/Or By Changing The System's Principle Of Operation.

**A. The applied references lack at least “*applying a current along at least one of said conductors of the cable*” and “*that allows plastic flow*”**

Claim 1 recites features that distinguish over the applied references. For example, claim 1 recites “applying a current along at least one of said conductors, such that a surface temperature of the conductor is raised by ohmic heating to at least substantially a thermal transition point **that allows plastic flow** of the heating element.”

Thrash appears to disclose a parallel resistance heating cable for use, for example, in a heating blanket or the like. Thrash discloses safety measures for ensuring that the heating cable does not overheat and, for example, cause ignition of material forming the heating blanket. The Examiner appears to have cited Thrash merely as an exemplary document disclosing a parallel resistance heating cable. However, Thrash does not teach, suggest, or disclose *applying a current along at least one of said conductors, such that a surface temperature of the conductor is raised by ohmic heating to at least substantially a thermal transition point that allows plastic flow of the heating element*, as recited in claim 1.

The Examiner, on pages 2 and 3 of the Office Action, asserts:

Thrash teaches the claimed subject matter except for showing use of heating of the conductors that supply power to the PTC heater to enable a proper bond of the conductors to the PTC element . . . . In addition the patent to Hess has been applied for teaching that it is conventional to heat a connection in a ptc to wire device during manufacture to enable a superior bond of the ptc element to the wire conductor . . . .

Applicant respectfully disagrees because Hess fails to teach or suggest at least the above-noted distinguishing features of claim 1, and thus fails to cure the deficiencies of Thrash.

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Hess appears to disclose a package and applicator for a plurality of heat recoverable members comprising a strip of electrically conductive material that is corrugated in a manner to receive and engage with the heat recoverable members. Heating the corrugated material causes the heat recoverable members to be heated and to shrink. Hess uses the corrugated material to heat a plurality of heat recoverable members at the same time. The heat recoverable members may also be provided with solder. When heating the heat recoverable members the solder melts. The combination of the compression of the recoverable member and the melted solder may be used to, for example, solder together two exposed wires, or a wire to a terminal. However, nowhere in Hess it is taught, disclosed, or suggested to melt the solder and heat the heat recoverable members "applying a current along at least one of said conductors," as recited in claim 1. Furthermore, there is no disclosure of the use of external or internal heating (e.g., by use of the corrugated material or by use of a conductor passing through the heat recoverable member) to heat a heating element and "**that allows plastic flow**," as recited in claim 1.

Therefore, in contrast to the teachings of Hess that heat is applied by passing a current through the corrugated material external to said cable, claim 1 recites *applying a current along at least one of said **conductors** of the cable*. Further, Hess discloses that the temperature is sufficient to shrink the heat recoverable members and melt the solder. In contrast, claim 1 recites *applying a current along at least one of said conductors, such that the surface temperature of the **conductor** is raised by ohmic heating to at least substantially the **thermal transition point that allows plastic flow of the heating element***.

**B. The Examiner Uses Improper Hindsight**

The Examiner has relied on improper hindsight in order to combine the references. Thrash and Hess lie in completely different fields, address two completely different problems, and address those different problems in completely different ways. Thrash is directed to an electrical safety circuit for discontinuing operating power to an electrical device when overheat condition is present and Hess is directed to an assembly for packaging a plurality of articles. Applicant cannot understand how these two clearly disparate technologies and references can be combined to establish a prima facie case of obviousness without the use of impermissible hindsight by the Examiner. *Interconnect Planning Corp. v Feil*, 777 F.2d 1132, 227 U.S.P.Q. 543 (Fed. Cir. 1985) (stating that when prior art references require selective combination to render obvious a subsequent invention, it is an error to reconstruct the patentee's claimed invention using the patentee's claims as a blueprint, there must be other motivation.); *In re Gorman*, 933 F.2d 982, 18 U.S.P.Q.2d 1885 (Fed. Cir. 1991) (stating it was impermissible to use applicant's structure as a template to select elements from a reference or references to fill in the gaps); *Para-Ordnance Manufacturing, Inc. v. SGS Importers International, Inc.*, 73 F.3d 1085, 1087, 37 U.S.P.Q.2d 1237, 1239 (Fed. Cir. 1995) ("Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor.").

**C. The Combination Destroys The Teachings In The Other Reference By Making The System Unsatisfactory For Its Intended Purpose And/Or By Changing The System's Principle Of Operation**

Further, based on the divergent purposes and operations of Thrash and Hess, any use by the Examiner to apply piecemeal parts of Hess's system to Thrash's system, or vice versa, to cure any of these above-noted deficiencies would destroy the teachings in the other reference by making the system unsatisfactory for its intended purpose and/or by changing the system's principle of operation. See M.P.E.P § 2143.01(V) and (VI). See also, 72 Fed. Reg. 57526 (V)(1) (suggesting obviousness cannot be found when "(1) one of ordinary skill in the art could not have combined the claimed elements by known methods (e.g., due to technological difficulties)") and *Application of Irmischer*, 262 F.2d 85, 88 (CCPA 1958) ("a basic reference and additional references having features somewhat analogous to those disclosed by appealed claims, which require material and radical modification in order to conform to appellant's claims, are not valid references unless they show an equivalent and operative combination which obviously could be substituted to meet the appealed claims by any skilled mechanic.").

Therefore, because (A) The applied references lack at least "*applying a current along at least one of said conductors of the cable*" and "*that allows plastic flow*", (B) The Examiner uses Improper Hindsight, and/or (C) The Combination Destroys The Teachings In The Other Reference By Making The System Unsatisfactory For Its Intended Purpose And/Or By Changing The System's Principle Of Operation, Applicant asserts the applied references fail to establish a prima facie case of obviousness for claim 1.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection, and find claim 1 allowable over the applied references. Also, at least based on their dependency to claim 1, claims 2-12 should be found allowable over the applied references, as well as for their respective additional features.

**Claim 13**

Independent claim 13 recites, among other features, "wherein at least one of the first and second conductors is configured to receive a current, such that a surface temperature of the at least one of the first and second conductors is raised by ohmic heating to at least substantially a thermal transition point that allows plastic flow of the heating element."

As discussed above, with respect to similar distinguishing features, using respective language, recited in independent claim 1, because (A) The applied references lack at least *"at least one of the first and second conductors is configured to receive a current"* and *"that allows plastic flow"*, (B) The Examiner uses Improper Hindsight, and/or (C) The Combination Destroys The Teachings In The Other Reference By Making The System Unsatisfactory For Its Intended Purpose And/Or By Changing The System's Principle Of Operation, Applicant asserts the applied references fail to establish a prima facie case of obviousness for claim 13.

Accordingly, Applicant respectfully asserts that claim 13 should be found allowable over the applied references.

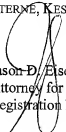
***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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Date: 2/20/09

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